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Bridging payroll inefficiencies through digital transformation: A case study of JDG Electricity Ltd.

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ABSTRACT

Payroll management remains an integral part of corporate governance, but many large organizations still use partially manual payroll systems, putting them at risk of operational, financial, and ethical problems. Using a real-world example of a payroll discrepancy at JDG Electricity Ltd, this research analyzes the issues caused by the company's use of a payroll cycle that was misaligned with its employee timekeeping system, which resulted in the company incorrectly overpaying a former employee for nearly two months due to a lack of real-time tracking of employees. This incident highlights the systemic issues arising from legacy payroll practices, including insufficient internal controls, delayed audits, and fragmented data management. A review of recent literature on Human Resource Information Systems (HRIS) and Digital Transformation found that manual payroll processes increase the risk of inaccurate and fraudulent payroll payments and decrease transparency within an organization. Research demonstrates that using automated payroll solutions, predictable audit trails, and integrated payroll systems can significantly increase both accuracy and accountability. The JDG Electricity case illustrates the importance of aligning payroll cycles with actual employee working periods and developing an effective internal audit structure. This study offers multidimensional solutions that incorporate payroll automation, policy alignment, periodic audits, and ethical communication practices to support transparent error resolution. Overall, this study indicates that implementing fully digital payroll solutions and developing proactive governance procedures are critical to reducing financial variances.

KEY WORDS

Payroll administration and automation; Financial risk; HR ethics; Organizational transparency; Process improvement; Net pay

ARTICLE HISTORY

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Introduction

The administration of employee compensation, commonly known as payroll administration, is a critical element of an organization's management; it reinforces the link between the human resource function and financial accountability [1]. The company advertised on a billboard for the first time. This medium will attract new customers. To ensure employee satisfaction with their workplaces and maintain organizational credibility, payroll systems of existing large organizations must provide accuracy, transparency, and efficiency [2]. Despite having the above-mentioned responsibilities, many businesses still use outdated payroll methods, continuing to rely on legacy or semi-manual systems. These systems generally offer little to no integration with other systems, lack automated functions, and do not support real-time execution of work-related processes.

JDG Electricity Ltd. is a leading electricity distribution company in India and employs approximately 5000 people; it provides a meaningful example of how payroll administration can negatively impact an organization. Although JDG has successfully developed efficient energy distribution processes, it also relies on a traditional payroll system that follows fixed time cycles (i.e., from the 15th of the month to the 15th of the next month) [3]. The result is procedural inefficiencies that manifest, as illustrated by an employee who received excessive pay after leaving the organization because the payroll system failed to update to reflect the employee's status as no longer employed by the company. These examples illustrate how obsolete payroll systems introduce inefficiencies into an organization regardless of its business model.

Publication of a dissertation is how a doctoral candidate presents research to illuminate their area of expertise. Research shows increasing awareness of the importance of payroll management as a risk-sensitive area of organizational governance. The field of Human Resource Management and Accounting systems has faced challenges in payroll processing due to manual payroll operations [4]. It has been determined that the manual payroll process is subject to errors, fraud, and compliance issues due to inadequate internal controls and inconsistent data sets. In industries such as public utilities, where transparency and accountability are paramount, payroll discrepancies can affect financial reporting, stakeholder confidence in the organization, and regulatory compliance.

This study will explore how payroll mismanagement originates at the systemic level rather than being attributed solely to human error. This study will analyze the case of JDG Electricity Ltd. by reviewing Nexisting research on HRIS

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(Human Resource Information Systems), digital transformation, and internal auditing to identify risk factors associated with payroll mismanagement and to provide recommendations for improvement. This research will also provide practical recommendations for organizations transitioning to digital payroll systems to ensure success, including continued automation of payroll processing, real-time data integration, and the selection of ethical governance frameworks to support the accuracy of payroll processes and the integrity of the organization.

Literature Review

Payroll management difficulties identified within JDG Electricity Ltd. are consistent with broader issues noted in human resources and accounting theory, particularly regarding the continued use of legacy and semi-manual systems [5]. Payroll systems used by large, multi-location companies often involve a combination of legacy systems and manual processes, resulting in inefficiencies and inconsistencies. Manual data entry and decentralized record-keeping have traditionally characterized legacy payroll systems and have been particularly prone to delays and inaccuracies, thereby exposing the company to increased operational risk and administrative vulnerability. According to recent studies, traditional payroll systems do not provide timely data updates nor are they capable of establishing structured workflows, both of which are necessary for executing accurate payroll [6].

Empirical studies indicate that manual payroll processes can be particularly vulnerable to errors, inadequate internal controls, and financial inaccuracies, making them highly susceptible to payroll miscalculations and unauthorized adjustments due to a lack of established audit trails and approval processes, as demonstrated by de Araújo & Nascimento. In addition, both the Association of Certified Fraud Examiners and Wells noted that payroll fraud (i.e., manipulation of overtime hours, creation of ghost employees, modification of employee benefits) occurs more frequently in paper-based systems or systems with insufficient oversight [7].

In addition to inaccurate financial statements, payroll inefficiencies negatively impact an organization's performance and governance. According to Dechow et al., discrepancies in payroll records may result in inaccurate financial statements, which, in turn, would impact budgeting, forecasting, and compliance with regulatory standards [8]. In the public sector utility industry, where accountability and transparency are critical, the negative impact of payroll inaccuracies is compounded [9]. Payroll mismanagement in power sector enterprises often results in audit objections, damage to organizational reputation, and operational inefficiencies, all of which further reinforce the need for strong governance frameworks around payroll [10].

To address these issues, the recent literature has increasingly advocated for the use of digital payroll systems. According to Bondarouk et al., automated payroll systems reduce manual error rates, improve data accuracy, and produce a reliable audit trail, thereby fostering greater accountability within the organization [11]. Similarly, Marler and Fisher report that HR digitalization enhances regulatory compliance, reduces unethical behavior, and streamlines payroll processes through integrated time-tracking and attendance systems [12]. Recent studies also support the notion that digitalizing accounting and HR systems results in improved decision-making, greater transparency, and improved efficiency within organizations [13].

Collectively, the literature underscores that outdated, manual payroll systems such as those identified in JDG Electricity Ltd. pose substantial financial, ethical, and operational risks [14]. Contemporary research consistently supports a transition toward automated, transparent, and integrated payroll systems as a critical strategy for strengthening internal controls, ensuring compliance, and sustaining long-term organizational integrity.

Case Description

A large multi-state electricity distributing company called JDG has approximately 5000 employees. The company operates a semi-manual payroll processing system using a standard mid-month payroll schedule (15th – 15th). While the company operated under normal circumstances using this old system, it created vulnerabilities in payroll processing when the payroll calculation periods did not align with the actual time an employee worked during the pay period.

The subject of this article is Kiran, an Assistant Manager, who resigned from JDG on January 31. Due to the payroll processing system using the mid-month schedule to determine Kiran's pay for the entire pay cycle (January 15-February 15), he received pay covering his last 15 days of employment and through pays that would not have been approved after his resignation. Kiran's pay was issued during the period of February 1–5, consistent with the company's pay process. Because there was no method for the company to determine an employee's employment status in real time, and it relied solely on manual processes to verify employment status, the overpayment remained undetected until the next payroll audit in mid-March.

The discovery of an employment overpayment to Kiran raises concerns about the effectiveness of JDG's internal control processes for payroll processing and the time it took the company to detect the employment error. Studies in the current literature on payroll and human resource information systems indicate that, while manual payroll systems are effective at providing integrated audit trails or automatic validation checkpoints for employee payroll processing, the ability to do so increases the risk of an employee receiving an overpayment of wages [7,14].

After the audit, the payroll department contacted Kiran to confirm the discrepancy, outlining in writing the nature of the overpayment and requesting repayment; the letter also warned Kiran of possible legal repercussions for failing to repay the money. Kiran admitted to the mistake of her company's system and worked cooperatively to return the overpaid salary by March, resulting in a very satisfactory resolution.

This case reflects a series of failures in operational processes: (i) misalignment between payroll cycles; (ii) no real-time exits; (iii) delayed audit discovery; and (iv) reliance on manual processes. The current literature supports the claim that automated payroll systems and human resources information systems (HRIS) significantly reduce risk by enabling real-time data synchronization, more accurate

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payroll and human resources data , and stronger governance [11,12]. The incident emphasizes the pressing need for timely audits and structured communication, as well as the importance of automating payroll functions, to ensure financial accuracy, ethical behavior, and efficient organizational operations.

Discussion

At JDG Electricity Ltd., a payroll discrepancy was caused by systemic failures stemming from process misalignment, technological limitations, and governance gaps. The misalignment of the payroll cycle (15th - 15th) with pay-pending dates created a structural loophole for overpayments after employee separation. Such temporal discrepancies have been widely acknowledged in contemporary human resource management scholarly publications as significant contributors to payroll inaccuracies and financial leakage, particularly in large, decentralized organizations [15].

From an operational standpoint, JDG relied on semi-manual payroll systems, which greatly increased the risk of human error, extended anomaly-detection timeframes, and created weak audit trails. Research strongly supports the claim that digital payroll systems integrated with HRIS provide greater accuracy in employee data, real-time tracking of employee status, and reduced reconciliation delays [14,12]. The absence of such systems at JDG led to errors persisting until the periodic internal audit, highlighting the inadequacy of reactive internal controls compared with proactive controls [16].

From an institutional perspective, the absence of mid-cycle adjustments and continuous auditing further compounded the issue. Modern governance frameworks (e.g., COSO-based internal controls) support the need for continuous auditing and automated validation checkpoints to ensure the accuracy of financial information and compliance [17].

The case demonstrates how to balance all aspects of organizational accountability while treating all employees equitably and fairly when recovering funds paid in error through overpayments. While it was important to recover the overpaid amounts, transparent communication and cooperative resolution strategies helped maintain the integrity and trust of the workplace from an ethical standpoint [18]. Recent HR literature on the ethics of HR supports this approach, stating that transparent communication can reduce conflict and protect the relationship between employers and employees, even when corrective actions are taken [19].

This case also yields many important learning experiences. Firstly, payroll structures must be properly implemented to precisely match actual working periods, thereby helping eliminate systemic payroll gaps [20]. Secondly, large organizations can no longer depend solely on manual processes; this is not a sustainable solution and contributes to many errors. Therefore, the need for digital transformation is evident [21]. Thirdly, organizations must implement a process to monitor employee lifecycle events as they occur (e.g., resignations, terminations) to help prevent unintended financial transactions [22]. Fourthly, organizations need robust internal audit systems that operate continuously, not just periodically [23]. Finally, ethical handling of payroll discrepancies occurs when organizations clearly communicate their payroll policies and procedures to employees and resolve them ethically. The company advertised on a billboard for the first time. This medium will attract new customers [24].

The JDG payroll incident has shown how integrating technology-focused solutions, realigning payroll processes, and implementing ethical governance can work together to deliver an open, accurate, and resilient payroll management process that meets today's organizational standards.

Conclusion

The case demonstrates how to balance all aspects of organizational accountability and treat all employees equitably and fairly when recovering funds paid in error through overpayments. While it was important to recover the overpaid amounts, transparent communication and cooperative resolution helped maintain the integrity and trust of the workplace from an ethical standpoint. Recent HR literature on the ethics of HR supports this approach, stating that utilizing transparent communication can reduce conflict and protect the relationship between employers and employees, even in scenarios involving corrective actions. This case also yields many important learning experiences. Firstly, payroll structures must be properly implemented to precisely match actual working periods, thereby helping eliminate systemic payroll gaps. Secondly, large organizations can no longer depend solely on manual processes; this is not a sustainable solution and contributes to many errors. Therefore, a need for digital transformation is evident. Thirdly, organizations must implement a process to monitor employee lifecycle events as they occur (e.g., resignations, terminations) to help prevent unintended financial transactions. Fourthly, organizations need robust internal audit systems that operate continuously rather than just periodically. Finally, ethical handling of payroll discrepancies occurs when organizations clearly communicate their payroll policies and procedures to employees and resolve them ethically. This enhances the organization's credibility. The JDG payroll incident has shown how integrating technology-focused solutions, realigning payroll processes, and implementing ethical governance can work together to deliver an open, accurate, and resilient payroll management process that meets today's organizational standards.

Disclosure Statement

The authors declare that they have no competing interests.

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